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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,277	09/10/2001	Leo Keller	FRR-12655	3939

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RANKIN, HILL, PORTER & CLARK LLP  
4080 ERIE STREET  
WILLOUGHBY, OH 44094-7836

EXAMINER
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PRIZIO JR, PETER

ART UNIT	PAPER NUMBER
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2674

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DATE MAILED: 04/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/936,277

Applicant(s)

KELLER, LEO

Examiner

Peter Prizio

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. This action is in response to the amendment filed on 6 February 2004.

### *Claim Status*

2. Claims 1 – 7 are pending in the application.
3. Claims 1 – 7 stand rejected.

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1-3, 6 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gunz in view of US Patent 3,961,840 to Morokawa et al. (Morokawa).

The disclosure of Gunz (Fig. 1) teaches an optical filter element (5) for dazzle protection. Gunz (Col. 3, Lines 41-44) also teaches a driving an optical filter element with a frequency of drive pulses to be between 0.01 and 1 Hz. Further, Gunz (Fig. 1 & 3) teaches an electro-optical filtering device containing an optical filtering element (5) with a liquid crystal (15), electronic means (Fig. 3) for driving at least one active filter element (5), a light sensor (4) operating in conjunction with a solar cell (3), wherein the liquid crystal is a TN-LCD (Col. 3, Line 25).

6. Gunz differs from claims 1-3 and 6 in that the optical filter element does not contain a switch to short-circuit the optical filter element between two successive drive pulses. However, Morokawa teaches driving a liquid crystal with anti-polar drive pulses (Fig. 4a – d) including a switch (Fig. 3e, 12) to short-circuit the liquid crystal (Col. 4, Lines 57 – 60). Morokawa further teaches that short-circuit times are shorter than time durations (Fig. 4a & 4b). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to drive the optical filter element between 0.01 and 1 Hz as taught by Gunz with anti-polar drive pulses and the short-circuit switch where the short circuit times are shorter than the time durations as taught by Morokawa to reduce power consumption.

7. Gunz, as applied to claim 6 above, differs from claim 7 in that Gunz does not teach a switch to short-circuit an active optical filter element, however Morokawa (Fig. 3e) teaches a switch (12) to short-circuit an active optical filter element. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the optical filter element as taught by Gunz with the switch as taught by Morokawa to reduce power consumption.

8. **Claims 4 and 5** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gunz in view of Morokawa as applied to claim 1 above, and further in view of applicants admitted prior art.

9. Gunz (Col. 3, Lines 54-56) teaches an increased voltage results in a reduction in the scattered light. Gunz does not specifically teach the scattered light term of claim 4, however, using the known equations 1 & 2 of the instant application. Gunz also does

not explicitly disclose an operating voltage several times above the Freedericksz-threshold, however one of ordinary skill in the art would realize a voltage high enough to obtain a high extinction (Line 35) would be several times above the Freedericksz-threshold. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of teachings of Gunz and Morokawa to where the scattered light term is equal to or less than the transmission term as taught by applicants admitted prior art to prevent transmission of light in excess of the safety standards.

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

***Response to Arguments***

11. Applicant's arguments filed 6 February 2004 have been fully considered but they are not persuasive.

12. In response to applicant's argument that Morokawa is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Morokawa is not in the field of shielding devices as is Gunz, however, Morokawa deals with liquid crystal driving and the shielding device utilizes liquid crystal. The Morokawa patent was relied upon for its circuit structure and drive pulse methods and not the fact that it is directed towards driving a display comprising a liquid crystal and not a shielding device comprising a liquid crystal. Regarding the comment that Gunz is classified in class 25 while Morokawa is classified in class 345, the USPTO classification system is not a determination for non-analogous art on the grounds that one class may be for an entire apparatus while another class may be for a major part incorporated into said apparatus.

13. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the

references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine Morokawa with Gunz stems from the fact that Gunz is a glare shielding device that employs at least one liquid crystal cell driven by an alternating frequency for generated by an LCD driver (14) and even compares the liquid crystal cell used in the preferred embodiment to a commercial twisted nematic liquid crystal display (column 3, line 26) while Morokawa is a driving circuit for a liquid crystal display. Moreover, Morokawa was not used for the entire liquid display, but merely the ideas presented with regard to implementing a short-circuit switch across the liquid crystal and the driving method thereof. Furthermore, Gunz teaches an operating frequency of the liquid crystal cell to be less than 32 Hz (Abstract) and Morokawa teaches an operating frequency of less than 100 Hz (column 4, line 10) and further highlights a test run on a liquid crystal display where the LCD was driven by an alternating voltage of 7V at a frequency of 32 Hz (column 7, line 20 – 30). Lastly Morokawa teaches the driving system is adaptable for selective polarization (column 9). Therefore, one of ordinary skill in the art would be motivated to modify the liquid crystal driver of the glare shielding device as taught by Gunz to include a short circuit switch across the liquid crystal cell and driving that switch with a pulse train that (Fig. 4a) short circuits the liquid crystal between each driving pulse positive or negative as taught by Morokawa for the benefit of reduced power consumption by discharging the capacitances inherent in the liquid crystal before continuing the drive cycle.

14. Lastly the applicant argues that Gunz in view of Morokawa in further view of applicant's admitted prior art does not show or suggest claim 4. However, claim 4 states "wherein a operating voltage is applied to the optical filter element at which operating voltage the scattered light term of the optical filter element is smaller than or equal to a transmission term of the optical filter element," the claim only reads that the scattered light term of the optical filter element need be smaller than or equal to the transmission term at a particular voltage. Therefore in light of equations 1 and 2 as provided by the applicant as known, and the suggestion that a voltage several times above the Freedrickzs threshold has a lower light transmission rate, with the teaching that a very high voltage consumes too much current (column 3, lines 20+), it would have been obvious to one of ordinary skill in the art, not to necessarily minimize the scattered light term, but to minimize the term while maintaining a voltage several times higher than the Freedericksz threshold for the benefit of obtaining the lowest possible power consumption with the benefit of maintaining low light transmission as to comply with the European standards.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Prizio whose telephone number is (703) 305-5712. The examiner can normally be reached on Monday-Friday (7:30-5:00), alternating Fridays off.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on (703) 305-4709. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Peter Prizio



Examiner  
Art Unit 2674

PP



RICHARD HJERPE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600